

REMARKS

In response to the Official Office Action dated November 23, 2007, claims 50, 58, and 86 have been amended. Claims 54-56 have been cancelled and new claims 109-114 have been added. Reexamination of this application in light of these amendments is respectfully requested.

The examiner's acknowledgement of patentable subject matter in the Office Action is greatly appreciated. However, independent claims 50, 58, and 86 stand rejected as being anticipated or obvious in view of Gardner, U.S. Patent No. 5,517,530. Gardner discloses a receiver that can selectively perform coherent and non-coherent demodulation based on current channel conditions. More particularly, Gardner teaches that coherent demodulation is preferable in non-fading conditions dominated by Additive White Gaussian Noise (AWGN). In contrast, non-coherent demodulation is preferred in situations when the signal is degraded by fading. Thus, the system in Gardner is designed to mitigate the effects of fading.

In contrast to Gardner, Applicants' claimed invention is designed to deal with different types of interference and to provide different levels of interference suppression. The different levels of interference suppression are obtained by using different sets of combining weights, depending upon the dominant interference. In one exemplary embodiment, RAKE combining weights are used in the demodulation process to combine received samples (e.g., time offset correlations) when the primary interference is own-cell interference, and uses a second set of combining weights when the primary interference is other-cell interference. For example, the first set of combining weights may take into account only channel estimates and provide a low degree of interference suppression, while the second set of combining weights takes into account spreading sequences and interference to provide a greater degree of interference suppression. While a RAKE receiver is used in this example to illustrate the invention, the

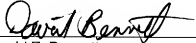
examiner will note that claims 50, 58, and 86 are not limited to RAKE receivers but apply to other types of receivers as well, such as chip equalization receivers.

The claims have been amended to incorporate the differences noted above that distinguish Applicants' invention from the prior art. More specifically, independent claims 50, 58, and 86 have been amended to recite that the first and second demodulation processes combine received samples using first and second combining weights respectively. As noted above, changing the combining weights used in the first and second demodulation processes can be used to change the level of interference suppression.

Based on the foregoing, it is respectfully urged that the presently-pending claims define over the prior art made of record and a notice of allowance is therefore respectfully solicited.

Respectfully submitted,

COATS & BENNETT, P.L.L.C.



David E. Bennett
Registration No.: 32,194

Dated: March 18, 2008

P.O. Box 5
Raleigh, NC 27602
Telephone: (919) 854-1844
Facsimile: (919) 854-2084